



Attorney Docket No: 042390.P3919

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:)
POISNER, D.) Examiner: Pierce, I.
Serial No.: 08/985,514) Art Unit: 2756
Filing Date: December 5, 1997)
For: METHOD FOR AUTOMATIC)
DEVICE MONITORING BY)
A CENTRAL COMPUTER)

**APPEAL BRIEF
(35 CFR §1.192)**

Applicant (Appellant) hereby submits this Brief in connection with the above-referenced application on appeal to the Board of Patent Appeals and Interferences from a final decision by the Examiner, mailed March 29, 2000, which finally rejected claims 1-4, 6-8, 10, 11, 13, 17, 18, 20, 21, and 23. Appellant respectfully requests consideration of this appeal by the Board of Patent Appeals and Interferences for allowance of the above-captioned patent application.

An oral hearing is not desired.

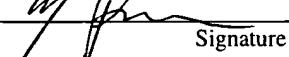
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REAL PARTY IN INTEREST

The real party in interest of Appellant is INTEL CORPORATION.

II. RELATED APPEALS AND INTERFERENCES

Appellant is unaware of any related appeals or interferences.

III. STATUS OF THE CLAIMS

Claims 1-4, 6-8, 10, 11, 13, 17, 18, 20, 21, and 23 are pending in the application.

No claims have been allowed.

1, 3, 7-10, 17-21

Claims 1, 3, 4, 6-8, 10, 17, 18, 20, and 21 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 5,892,690 issued to Boatmen et al., (Boatman) in the Final Office Action mailed March 29, 2000. Additionally, claims 2-4, 11, 13, and 23 stand rejected under 35 U.S.C. § 103(a) as being considered obvious over Boatman in the Final Office Action.

2, 11-13, 22
3-4, 11, 13, 22

IV. STATUS OF AMENDMENTS

No amendments have been filed after receipt of the Final Office Action.

V. SUMMARY OF THE INVENTION

The present invention relates to a method for monitoring and controlling a plurality of devices in a common environment. The method comprises the steps of receiving usage information from one or more of the devices and storing the usage information on a memory device of a central computer. The central computer acts as a central controller and maintenance monitor under the direction of software stored in memory of the central computer. (Specification page 5, line 25 through page 6, line 2).

The method further comprises the steps of using the computer to automatically access a remote database containing information regarding the one or more devices and

transmitting the stored usage information to the remote database. The central computer is coupled to an external transmission line, which, in one embodiment, is a telephone line for connecting to a remote database through a mode of the central computer according to known protocols. In another embodiment, the transmission line is a point-to-point connection between the central computer and the remote database (Specification page 6, lines 8-13).

The database contains a wide range of sets of information specific to different devices. For example, manufacturers of specific devices can assemble information regarding the devices for storage on the database and dissemination therefrom. (Specification page 7, lines 19-22). The control of devices coupled to the central computer can change based on current information received from the database. (Specification page 7, line 25 through page 8, line 1).

The present invention overcomes the disadvantages of prior art control systems in that prior systems are incapable of monitoring how the devices themselves are actually used in an environment. (Specification page 5, lines 23-25). Moreover, prior systems are incapable of controlling the devices without human intervention. (Specification page 6, lines 3-7).

VI. ISSUES PRESENTED

The issues presented on appeal are (1) whether claims 1, 3, 4, 6-8, 10, 17, 18, 20, and 21 are anticipated under 35 U.S.C. § 102(e) over Boatman; and (2) whether claims 2-4, 11, 13, and 23 are unpatentable under 35 U.S.C. § 103(a) over Boatman.

VII. GROUPING OF CLAIMS

Claims 1-4 and 6-8 stand or fall together in Group I. Claim 1 is considered representative of the broadest scope of the invention. Claims 10, 11, 13, 17, and 18 stand or fall together in Group II. Claim 10 is considered representative of the broadest scope of Group II. Claims 20, 21, and 23 stand or fall together in Group III. Claim 20 is considered representative of the broadest scope of Group III.

VIII. ARGUMENT

1. BOATMAN DOES NOT ANTICIPATE THE SUBJECT MATTER OF CLAIMS 1, 3, 4, AND 6-8

Boatman discloses an environment monitoring system for monitoring the quality of air or water at a particular location. The system includes a site monitoring assembly with sensors coupled to a data storage device for storing data of the sensors. The data storage device is coupled to a remote access device (modem) so that a site controller can collect the sensor data for storage and analysis by a remote data collection system. A system controller is employed to initiate access to the site monitoring assemblies. (Col. 2, lines 23-62). Boatman also teaches that the remote data collection system may output periodic reports (data) of air quality, in printed form, by disk or via the Internet for review and analysis by the individual sites. (Col. 3, lines 30-35).

In the Final Office Action, the Examiner considers the Boatman disclosure on filtering systems, *BACKGROUND*, and sensor data, *DETAILED DESCRIPTION*, to teach “*collecting usage information from the one or more devices. . .*” Information collected from the sensors in Boatman contains data which describes environmental conditions at the filtering devices, determines polling intervals, (Col. 2, lines 36-62, Col. 3 line 56-Col. 4 line 4) and filter replacement schedules (Col. 4, lines 5-24). The Examiner further

states that Boatman discloses “accessing a remote database by the computer, the remote database containing information specific to the one or more devices. . . to receive the information specific to the one or more devices from the remote database.” In Boatman, system operators are authorized to review the contents of the remote databases to determine when various human actions need to be taken on the devices (for example, to determine the frequency at which filtering devices, which are used to filter residues from the air, need to be changed (Col. 4, lines 9-14)). By this rationale, Examiner contends that Boatman anticipates the present invention.

The present invention is distinguished from Boatman in two key respects. First, Examiner states that because the remote databases in Boatman collect information specific to the one or more sensor devices, such as sensor identification number, air quality measurement, date and time, and site identification number (Col. 3, lines 7-42), the Boatman invention is concerned with monitoring the usage of specific devices operating in an environment. However, Boatman is only concerned with monitoring the environment per se. Boatman fails to teach and disclose collecting “information regarding usage” from the devices (e.g., a television, a VCR, a washing machine, a refrigerator, a stereo, etc. (Specification page 7, lines 14-18)); that is, how the devices themselves are actually used as opposed to the environment in which they happen to reside. Moreover, Boatman does not contemplate monitoring intelligent devices that can not only transmit signals to the central computer, but that can also be directed to take some action by the central computer (such as directing an intelligent television/VCR to program itself to tape a certain television program (Specification page 6, lines 3-7)). Although system operators in Boatman are authorized to review the contents of the

remote database to determine when various actions need to be taken on the devices (for example, to determine the frequency at which filtering devices, which are used to filter residues from the air, need to be changed (Col. 4, lines 9-14)), Boatman does ^{NOT} anticipate automatic control of devices by a central computer as does the present invention.

In addition, although Boatman discloses collecting environmental data (air or water quality) recorded by sensors coupled to a data storage device for storing data of the sensors, Boatman does not contemplate actual *control* of the sensors by a central computer. In Boatman, system operators are authorized to review the contents of the remote database and program polling intervals from the sensors based on the results of the sensor data (data collected by the remote databases is used to control data collection operations at the sensor devices (Col. 2 lines 23-62, Col. 3 lines 35-43, Col. 4 lines 5-43)). However, the data collection operations disclosed in Boatman require user intervention and do not involve responsive control signals being sent back to the devices. Boatman is thus markedly different from the control system of the present invention in which a computer controller *automatically* transmits control signals to devices to change the operation of those devices based on sets of information specific to those devices received from a remote database. For example, in one embodiment of the present invention, the device can be a home appliance such as an oven that receives a command from the computer to self-clean and, in response, initiates a self-clean cycle. (Specification page 3, lines 5-7). This fundamental distinction between Boatman and the present invention is recited in claim 1 which states:

“A method for monitoring and controlling one or more devices in a common environment, comprising. . . transmitting a control signal from the computer to the one or more devices, the control signal being generated by the computer based on the

information received from the remote database.”

Under 35 U.S.C. § 102, a prior art reference anticipates a claim only if the reference discloses expressly or inherently every limitation of a claim. Absence from the reference of any claimed element negates anticipation. Rowe v. Dror, 112 F.3d 473, 478 [42 USPQ2d 1550, 1553] (Fed. Cir. 1997). Because Boatman fails to teach or disclose transmitting a control signal from the computer to control one or more devices as is recited in the present claims, Applicant respectfully submits that Boatman does not anticipate the present invention.

A. SIMILARLY, BOATMAN DOES NOT ANTICIPATE THE SUBJECT MATTER OF CLAIMS 10, 17, AND 18

Claims 10, 17, and 18 are distinguished from Boatman for the same reasons given above. Specifically, independent claim 10 states:

“A computer readable medium having stored thereon instructions, which, when executed, cause a computer to: collect usage information from one or more devices operating in a common environment. . . and transmitting a control signal from the computer to the one or more devices, the control signal being generated by the computer based on the information received from the database.”

As explained above, Boatman is only concerned with monitoring the usage of sensors operating in an environment. Boatman fails to teach and disclose collecting information about how various devices (such as a television, a VCR, a washing machine, etc.) are actually used. Moreover, Boatman does not disclose automatic control of the sensors by a central computer. Anticipation under 35 U.S.C. § 102 requires the presence in a single prior art disclosure of each and every element of a claimed invention. Lewmar Marine, Inc. v. Parient, Inc., 827 F.2d 744, 747 [3 USPQ2d 1766, 1767] (Fed. Cir. 1987), cert. denied, 484 U.S. 1007 (1988). (This law also applies to claims 1, 3, 4, and 6-8 above).

Applicant respectfully submits that the Examiner has failed to show by clear and convincing evidence that each and every element of claims 10, 17, and 18 is taught by the cited reference. Absent clear teaching or disclosure in the Boatman reference of each and every step recited in the subject claims, the rejection under 35 U.S.C. § 102 must be withdrawn.

B. BOATMAN LIKEWISE DOES NOT ANTICIPATE THE SUBJECT MATTER OF CLAIMS 20 AND 21

Claims 20 and 21 are also distinguished from Boatman for the reasons described above.

Independent claim 20 states:

“A system for automatically maintaining and controlling a plurality of devices, comprising . . . a software program stored in the memory, execution of the software program directing the computer controller to periodically access the remote database to transmit usage information received from the plurality of devices to the remote database, and also to . . . receive the sets of information specific to the devices from the remote database, the software program further causing the computer controller to transmit control signals to the devices based on the sets of information received from the remote database.”

To reiterate the argument made *supra* in Section VIII.1.A., anticipation under 35 U.S.C. § 102 requires the presence in a single prior art disclosure of each and every element of a claimed invention. Lewmar Marine, 827 F.2d at 747. Since Boatman fails to teach a computer transmitting a control signal to one or more devices, Applicant respectfully submits that Boatman does not anticipate the claimed invention.

2. A PERSON OF ORDINARY SKILL IN THE ART WOULD NOT HAVE FOUND THE SUBJECT MATTER OF CLAIMS 2-4 OBVIOUS IN LIGHT OF BOATMAN

The Examiner further contends that claims 2-4 are unpatentable under 35 U.S.C. § 103(a) as being obvious in view of Boatman. An obviousness analysis asks whether the subject matter of the claimed invention would have been obvious to one skilled in the art at the time the invention was made, *not* what would have been obvious to a judge after reading the patent in suit and hearing the testimony. Panduit Corp. v. Dennison Mfg. Co., 774 F.2d 1082, 1092 [227 USPQ 337] (Fed. Cir. 1986).

There is nothing in Boatman that teaches or suggests the utility of the present invention. Specifically, an ordinary artisan reading about the Boatman system for monitoring the usage of sensors operating in an environment would never have come up with the present invention. As is stated *supra* in Section VIII.1.A., Boatman is only concerned with monitoring the environment per se. Boatman fails to teach, disclose, or suggest a monitoring system that determines how the devices themselves (e.g., a television, a VCR, a washing machine, a refrigerator, etc.) are actually used. An ordinary practitioner reading Boatman would have lacked motivation to arrive at the present invention because Boatman is completely unconcerned with his monitoring devices themselves. Moreover, even if an ordinary artisan found motivation to apply the teachings in Boatman to collect actual usage information of devices, there would still be lacking the motivation or suggestion of Applicant's additional step of controlling the devices without user intervention.

It is a well established rule of law that each prior art reference must be evaluated as an entirety, and that all of the prior art must be evaluated as a whole. W.L. Gore & Assocs., Inc. v. Garlock, Inc., 721 F.2d 1540, 1550 [220 USPQ 303] (Fed. Cir. 1983).

There is nothing in Boatman that suggests the utility of a computer controller automatically transmitting control signals to devices to change the operation of those devices. In other words, for the Examiner to conclude that the Boatman invention would have lead one of ordinary skill to Applicant's invention is only possible through impermissible hindsight, using the present invention as a starting point or template.

A. **SIMILARLY, A PERSON OF ORDINARY SKILL IN THE ART WOULD NOT HAVE FOUND THE SUBJECT MATTER OF CLAIMS 11 AND 13 OBVIOUS IN LIGHT OF BOATMAN**

Claims 11 and 13 are distinguished from Boatman for the same reasons given above.

B. **A PERSON OF ORDINARY SKILL IN THE ART WOULD LIKEWISE NOT HAVE FOUND THE SUBJECT MATTER OF CLAIM 23 OBVIOUS IN LIGHT OF BOATMAN**

Claim 23 is distinguished from Boatman for the same reasons given above.

3. **THE CLAIMS OF GROUP II AND GROUP III ARE SEPARATELY PATENTABLE SINCE THE SUBJECT MATTER OF THOSE CLAIMS IS NEITHER TAUGHT NOR SUGGESTED BY THE PRIOR ART**

Claims 10, 11, 13, 17, and 18 (Group II) describe a computer readable medium having stored thereon instructions which cause the computer to collect and store information from one or more devices operating in a common environment. The computer periodically controls the one or more devices based on information received from a remote database. The invention of Group II is distinct from the subject matter of claims 1-4 and 6-8 (Group I), which describe a method for monitoring and controlling one or more devices in a common environment. The limitations of claims 10, 11, 13, 17, and 18 are not found or previously recited in independent claim 1 (or dependent claims 2-4 and 6-8) and are not taught or suggested by the prior art. Therefore, it is respectfully

submitted that the subject matter of claims 10, 11, 13, 17, and 18 is separately patentable from Group I.

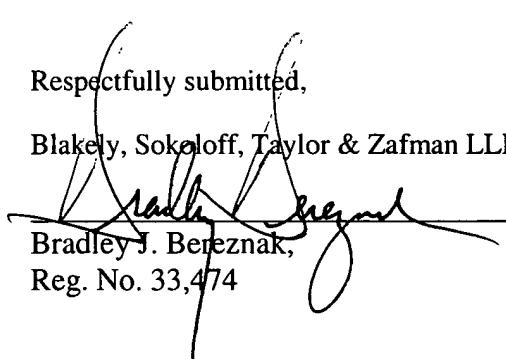
Likewise, claims 20, 21, and 23 (of Group III) are distinct from the subject matter of Group I and the subject matter of Group II. Claims 20, 21, and 23 describe a system for automatically maintaining and controlling a plurality of devices by a computer coupled to a remote database via a transmission line. The limitation of a transmission line found in independent claim 20 is not found or previously recited in claims 1-4 and 6-8 or in independent claim 10 (or dependent claims 11, 13, 17, and 18). Therefore, it is respectfully submitted that the subject matter of claims 20, 21, and 23 is separately patentable from Group I and Group II.

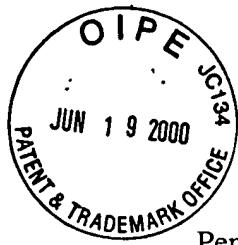
IX. CONCLUSION

In sum, Boatman does not anticipate the subject matter of the claimed invention. Moreover, there is no motivation or teaching in Boatman that would have lead one of ordinary skill in the art to the present invention at the time it was made. Applicant respectfully submits that the appealed claims in this application are patentable, and requests that the Board of Patent Appeals and Interferences direct allowance of rejected claims 1-4, 6-8, 10, 11, 13, 17, 18, 20, 21, and 23.

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Appendix

Pending claims 1-4, 6-8, 10, 11, 13, 17, 18, 20, 21, and 23 read as follows:

1. A method for monitoring and controlling one or more devices in a common environment, comprising:
 - collecting usage information from the one or more devices by a computer coupled to the one or more devices;
 - storing the usage information in a memory associated with the computer;
 - periodically accessing a remote database by the computer, the remote database containing information specific to the one or more devices, the computer accessing the remote database to:
 - transmit the usage information to the remote database,
 - receive the information specific to the one or more devices from the remote database; and
 - transmitting a control signal from the computer to the one or more devices, the control signal being generated by the computer based on the information received from the remote database.
2. The method of claim 1, wherein the usage information comprises:
 - an average length of time the one or more devices has been in operation over a period of time;
 - a number of occasions the one or more devices has been in operation over a period of time;
 - a number of times maintenance was performed on the one or more devices over the period of time; and

types of maintenance operations that were performed on the one or more devices over the period of time.

3. The method of claim 1, wherein the remote database is accessed by the computer via an internet connection.

4. The method of claim 1, wherein the remote database is accessed by the computer via a point-to-point connection between the computer and the remote database.

6. The method of claim 1, further comprising:

updating the information contained in the remote database specific to the one or more devices by a manufacturer of the one or more devices.

7. The method of claim 1, wherein the one or more devices include at least one home appliance and wherein the common environment is a house.

8. The method of claim 1, wherein the one or more devices comprise manufacturing equipment and wherein the common environment is a manufacturing facility.

10. A computer readable medium having stored thereon instructions, which, when executed, cause a computer to:

collect usage information from one or more devices operating in a common environment;

store the usage information in a memory associated with the computer;

periodically access a remote database, wherein the remote database contains information specific to the one or more devices;

transmit the usage information to the remote database;

receive the information specific to the one or more devices from the remote database; and

transmitting a control signal from the computer to the one or more devices, the control signal being generated by the computer based on the information received from the remote database.

11. The computer readable medium of claim 10, wherein the stored instructions, when executed, further cause the computer to:

receive an identifier of a device when the device is initially installed in the common environment; and

store the identifier in such a way that it becomes associated with the usage information collected from the device.

13. The computer readable medium of claim 11, wherein the usage information collected from the device comprises:

an average length of time the device has been in operation over a period of time;

a number of occasions the device has been in operation over the period of time;

a number of times maintenance was performed on the device over the period of time; and

types of maintenance operations that were performed on the device over the period of time.

17. The computer readable medium of claim 10, wherein the one or more devices include at least one home appliance and wherein the common environment is a house.

18. The computer readable medium of claim 10, wherein the one or more devices comprise manufacturing equipment and wherein the common environment is a manufacturing facility.

20. A system for automatically maintaining and controlling a plurality of devices, comprising:

a computer controller having a memory, the computer controller being coupled to each of the plurality of devices;

a remote database that contains sets of information specific to each of the devices;

a transmission line coupled to the remote database and to the computer controller for data transmissions therebetween; and

a software program stored in the memory, execution of the software program directing the computer controller to periodically access the remote database to transmit usage information received from the plurality of devices to the remote database, and also to receive the sets of information specific to the devices from the remote database, the software program further causing the computer controller to transmit control signals to the devices based on the sets of information received from the remote database.

21. The system of claim 20, wherein the devices comprise home appliances and entertainment equipment.

23. The system of claim 20, wherein each of the plurality of devices includes an identifier and wherein the computer controller accesses a record in the remote database that contains information specific to one of the plurality of devices by transmitting the identifier.